

**UNITED STATES DEPARTMENT OF COMMERCE****Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

*T-D*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/098,730 06/18/98 SUGIYAMA

T PM-254782

IM22/0925

PILLSBURY MADISON & SUTRO  
INTELLECTUAL PROPERTY GROUP  
1100 NEW YORK AVENUE NW  
NINTH FLOOR - EAST TOWER  
WASHINGTON DC 20005-3918

EXAMINER

TUNG, T

ART UNIT	PAPER NUMBER
----------	--------------

1743

DATE MAILED:

09/25/00

*13*

Please find below and/or attached an Office communication concerning this application or proceeding.

**Commissioner of Patents and Trademarks**

## Office Action Summary

Application No.	09/098,730	Applicant(s)	SUGIYAMA 127AL	
Examiner	T. TUNG	Group Art Unit	1743	Paper No. 13

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

### Status

Responsive to communication(s) filed on 8-16-00

This action is FINAL.

Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

### Disposition of Claims

Claim(s) 1, 2, 4, 6-8 is/are pending in the application.

Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

Claim(s) \_\_\_\_\_ is/are allowed.

Claim(s) 1, 2, 4, 6-8 is/are rejected.

Claim(s) \_\_\_\_\_ is/are objected to.

Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

### Application Papers

See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

The proposed drawing correction, filed on \_\_\_\_\_ is  approved  disapproved.

The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

The specification is objected to by the Examiner.

The oath or declaration is objected to by the Examiner.

### Priority under 35 U.S.C. § 119 (a)-(d)

Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

All  Some\*  None of the CERTIFIED copies of the priority documents have been received.

received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_.

### Attachment(s)

Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_

Interview Summary, PTO-413

Notice of Reference(s) Cited, PTO-892

Notice of Informal Patent Application, PTO-152

Notice of Draftsperson's Patent Drawing Review, PTO-948

Other \_\_\_\_\_

## Office Action Summary

Art Unit: 1102

Claims 1, 2, 4, 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mase et al '456 in view of Suzuki et al.

Applicant argues that the Sumitomo article substantiates his claim that larger sinter particle size does not mean larger porosity. In particular, he points to sample AKP-3000, which (according to applicant) has a smaller particle size than sample AKP-20, as having a higher porosity than the latter sample. Incidentally, in his remarks on page 5 of the Aug. 15, 2000 response, applicant refers to a sample AKP-300. Presumably, this is a typographical error, and applicant meant AKP-3000.

This argument is not persuasive in that it appears to be based upon a misreading of the Sumitomo article. In one table, the particle size of AKP-20 is given as 0.4-0.6, while the particle size of AKP-3000 is given as 0.4-0.7. In another table, the mean particle size of AKP-20 is given as 0.57, while the mean particle size of AKP-3000 is given as 0.66. Thus, in both cases, the 3000 sample has larger, not smaller, particle size contrary to applicant's assertion. There is a graph showing particle size distribution. Since the two curves representing samples 20 and 3000 intersect, it is unclear what conclusion can be drawn therefrom.

It is interesting to note that sample AKP-30, which clearly has a particle size lower than those of samples 20 and 3000, has a fired density higher than the latter two. Further, sample AKP-53 in the density graph also has a fired density higher than the other samples. If "53" is a typographical error of sample AKP-50 in the table at the top of page 2 of the article, it is clear

Art Unit: 1102

that this sample has a substantially lower particle size, which results in a substantially higher density (and thus lower porosity).

Therefore, the Sumitomo article seems to substantiate the examiner's position. At the very least, the article does not in any fashion support applicant's position.

It is further noted that in his remarks (page 4, line 3 from the bottom) in the Aug. 15 response, applicant states that porosity is influenced by the "fineness" of a material. The word "fine" is opposite in meaning to the word "coarse". Both of these words deal with the size of a particle. Thus, applicant appears to be admitting that particle size influences porosity.

Applicant also argues that the porous coating layer in question in Suzuki is an outer layer that has a different function than the layer in question in Mase or applicant's invention which is an inner layer. Therefore, there is no motivation to combine the references.

This argument is not persuasive. Mase already discloses inner layers that serve the identical purpose as applicant's boundary layers. Suzuki is merely cited for the purpose of showing that one of ordinary skill in the art would select a particle size for a layer larger than the particle size of an adjacent layer if he desires to have a larger porosity than that of the adjacent layer. What difference does it make whether the layer involved is an inner layer or an outer layer, since that does not affect the premise of larger particle size for greater porosity?

Claim 8 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 1102

Claim 8, line 2, "those" apparently should be --that--, since "size" is singular.

Also, this claim appears to be redundant with the last paragraph of its parent claim 1.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The examiner can be reached at 703-308-3329. His supervisor Jill Warden can be reached at 703-308-4037. Any general inquiry should be directed to the receptionist at 703-308-0661. A fax number for TC 1700 is 703-305-7719.



Ta Tung

Primary Examiner

Art Unit 1743